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LO	Phe	Tyr 290	Gin	lle	Met	Ser	Asn 295	Lys	Ļys ·	Pro	Asp	Leu 300	lle	Glu	Met	Leu
L 5	Leu 305		Thr	Thr	Asn	Pro 310	Tyr	Asp	Tyr	Ala	Phe 315	Val	Ser	Gln	Gly	G1 u 320
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25	Lys 545		Thr	Asp	Thr	Ser 550	Phe	Lys	Asn	Lys	Leu 555	Tyr	Glu	Gln	His	Leu 560
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10	Phe	Val	Arg 675	Cys	He	He	Pro	Asn 680	Glu	Thr	Lys	Thr	Pro 685	Gly	Ala	Met
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30	ile	Asp	755		His	Thr	Gin	Tyr 760		Phe	Gly	His	Thr 765		Val	Phe
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40	Leu 785		ı Gir	ı Lei	ılle	Thr 790		; Thr	GIn	Ala	Met 795		Arg	Gly	Phe	Leu 800
-	Ala	a Arg	g Val	Glu	ı Tyr 805		ı Lys	Met	: Val	Glu 810		, Arg	G G Lu	Ser	lle 815	
45	Cys	: e	e Gir	Tyr	r Asn	ı Val	Arg	, Ala	Phe		: Asn	ı Val	Lys	His		Pro

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5	Thr	Glu 850	Lys	Glu	Met	Ala	Asn 855	Met	Lys	Glu	Glu	Phe 860	Glu	Lys	Thr	Lys
10	Glu 865	Glu	Leu	Ala	Lys	Thr 870	Glu	Ala	Lys	Arg	Lys 875	Glu	Leu	Glu	Glu	Lys 880
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	He	Lys	Thr 915	Lys	lle	GIn	Leu	Glu 920	Ala	Lys	lle	Lys	Glu 925	Val	Thr	Glu
25	Arg	Ala 930		Asp	Glu	Glu	Glu 935	lle	Asn	Ala	Glu	Leu 940	Thr	Ala	Lys	Lys
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	Glu	Phe 1175	Gln	Lys	Met	Arg	Arg 1180	Asp	Leu	Glu	Glu	Ala 1185	Thr	Leu	Gln
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	Ala	GIn 1280		Ala	Arg	Leu	GIn 1285	Thr	Glu	Ser	Gly	Glu 1290	Tyr	Ser	Arg
25	Gin	Leu 1295	-	Glu	Lys	Asp	Thr 1300	Leu	Val	Ser	Gin	Leu 1305	Ser	Arg	Gly
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35	Glu	Glu 1325		lle	Lys	Ala	Lys 1330	Ser	Ala	Leu	Ala	His 1335	Ala	Leu	Gin
40	Ser	Ser 1340		His	Asp	Cys	Asp 1345		Leu	Arg	Glu	GIn 1350		Glu	Glu
	Glu	GIn 1355		Ala	Lys	Ala	Glu 1360	Leu	Gin	Arg	Ala	Met 1365		Lys	Ala
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10	Lys	Cys 1415	Ala	Ser	Leu	Glu	Lys 1420	Thr	Lys	Gln	Arg	Leu 1425	Gin	Asn	Glu
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20	Ala	Ala 1445	Leu	Asp	Lys	Lys	GIn 1450	Arg	Asn	Phe	Asp	Lys 1455	He	Leu	Ala
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20	ĠIJ	Asp 1625	Leu	Asn	Glu	Met	Glu 1630	ile	Gln	Leu	Asn	His 1635	Ala	Asn	Arg
	Met	Ala 1640	Ala	Glu	Ala	Leu	Arg 1645	Asn	Tyr	Arg	Asn	Thr 1650	GIn	Ala	lle
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30	Glu	Asp 1670		Lys	Glu	Gln	Leu 1675		Met	Val	Glu	Arg 1680		Ala	Asn
35		Leu 1685								_		Thr 1695		Glu	GIn
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	Ser	Glu 1715		Val	Gin	Leu	Leu 1720		Thr	GIn	Asn	Thr 1725		Leu	He
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	Glu	Met 1745	Glu	Asp	lle	lle	GIn 1750	Glu	Ala	Arg	Asn	Ala 1755	Glu	Glu	Lys
5	Ala	Lys 1760	Lys	Ala	lle	Thr	Asp 1765	Ala	Ala	Met	Met	Ala 1770	Glu	Glu	Leu
10	Lys	Lys 1775	Glu	Gln	Asp	Thr	Ser 1780	Ala	His	Leu	Glu	Arg 1785	Met	Lys	Lys
15	Asn	Leu 1790	Glu	Gln	Thr	Val	Lys 1795	Asp	Leu	GIn	His	Arg 1800	Leu	Asp	Glu
20	Ala	Glu 1805	Gin	Leu	Ala	Leu	Lys 1810	Gly	Gly	Lys	Lys	GIn 1815	He	Gin	Lys
	Leu	Glu 1820		Arg	Val	Arg	Glu 1825		Glu	Gly	Glu	Va I 1830	Glu	Ser	Glu
25	Gin	Lys 1835		Asn	Val	Glu	Ala 1840	Val	Lys	Gly	Leu	Arg 1845		His	Glu
30	Arg	Lys 1850		Lys	Glu	Leu	Thr 1855		GIn	Thr	Glu	Glu 1860		Arg	Lys
35	Asn	lle 1865		_			Asp 1870			-	_	Leu 1875		Ala	Lys
40	Val	Lys 1880		Tyr	Lys	Arg	Gln 1885		Glu	Glu	Ala	Glu 1890		Gln	Ser
	Asn	Va I 1895		Leu	Ser	Lys	Phe 1900		Arg	lle	GIn	His 1905		Leu	Glu
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30	gat att gtt ccc agc cag ggg gag atc agc gtt gga gag tcc aaa ttc Asp lle Val Pro Ser Gin Gly Glu lle Ser Val Gly Glu Ser Lys Phe 25 30 35	151
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- 1 0	gtg gtg tgg aat gat gat tcc tcc tcc acc ctc acc atc tat aac gcc Val Val Trp Asn Asp Asp Ser Ser Ser Thr Leu Thr lle Tyr Asn Ala 75 80 85	295
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5					-	cca Pro		-							439
10						gat Asp 140									487
15						cga Arg									535
20						aac Asn									583
						cgc Arg									631
25			Phe			att									679
30		Ala				att lle 220									, 727
35						gat Asp								Ser	775
40					Gly	gaa Glu			Gin				Glu	aag Lys	823
				Ser		gat Asp		GIn				Lys			871
45	_		Asp	_		gag Glu	He				Asn			ggc Gly	919

										aaa Lys		967
5					-	_				gtc Val 325		1015
10										tgg Trp		1063
15										ggg Gly		1111
20					-		_		_	aag Lys	_	1159
20										aac Asn		1207
25							-			gcc Ala 405		1255
30										cag Gin		1303
35										tca Ser		1351
40										atc lle		1399
10										gac Asp		1447
45										att He 485		1495

					ctt Leu		-	_				1543
5					cca Pro 510		_				_	1591
10					ggt Gly							1639
15					gaa Glu							1687
20					gag Glu							1735
	_	_	_	_	gta Val	 _				. –		1783
25					gcc Ala 590							1831
30					aag Lys							1879
35					ctg Leu							1 927
40					agg Arg							1975
- 3					tct Ser							2023
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10		ggg Gly	_			-				_				_		•	2215
15		gtt Val								_		_					2263
20		tgc Cys		-							-				_	_	2311
7.		aag Lys 760	_	_				_	_	_		_		_			2359
25		gag Glu															2407
30		gat Asp														acg . Thr	2455
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Lys Lys Asp Val Arg Phe Ile Val Leu Ser Asn Asn Tyr Leu Gin Ile

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	He	Leu	Ala 195	Arg	Gly	Glu	lle	Asn 200	Phe	Lys	Asp	lle	GIn 205	Vai	lie	Val
10	Asn	Val 210	Pro	Pro	Thr	He	Arg 215	Ala	Arg	Gln	Asn	lle 220	Val	Asn	Ala	Thr
15	Ala 225	Asn	Leu	Gly	GIn	Ser 230	Val	Thr	Leu	Val	Cys 235	Asp	Ala	Glu	Arg	Phe 240
20	Pro	Glu	Pro	Thr	Met 245	Ser	Trp	Thr	Lys	Asp 250	Gly	Glu	Gln	lle	Glu 255	Gln
25	Glu	Glu	Asp	Asp 260	Glu	Lys	Tyr	lle	Phe 265	Ser	Asp	Asp	Ser	Ser 270	GIn	Leu
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35	Phe 305	Ala	Lys	Pro	Lys	lle 310	Thr	Tyr	Val	Glu	Asn 315	Gln	Thr	Ala	Met	Glu 320
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45	Pro	Ser	lle	Thr 340	Trp	Arg	Thr	Ser	Thr 345	Arg	Asn	lle	Ser	Ser 350	Glu	Glu
	Lys	Thr	Leu 355		Gly	His	Met	Va I 360	Vaİ	Arg	Ser	His	Ala 365	Arg	Val	Ser

5	Ser	Leu 370	Thr	Leu	Lys	Ser	11e 375	Gln	Tyr	Thr	Asp	Ala 380	Gly	Glu	Tyr	lle
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20.	Ser	Ala	Thr 435	He	Ser	Trp	Phe	Arg 440	Asp	Gly	GIn	Leu	Leu 445	Pro	Ser	Ser
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	Trp 545	His	Ser	Lys	Trp	Tyr 550	Asp	Ala	Lys	Glu	Ala 555	Ser	Met	Glu	Gly	lle 560

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30.	Tyr	Val	Va I 675		Glu	Asn	Gln	G1n 680		Lys	Ser	Lys	Ala 685		His	Phe
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5	Ala Gly Pro Gly Ala Lys Gly Lys Asp Met Glu Glu Gly Lys Ala Ala 755 760 765
	Phe Ser Lys Asp Glu Ser Lys Glu Pro Ile Val Glu Val Arg Thr Glu 770 775 780
10	Glu Glu Arg Thr Pro Asn His Asp Gly Gly Lys His Thr Glu Pro Asn 785 790 795 800
15	Glu Thr Thr Pro Leu Thr Glu Pro Glu Lys Gly Pro Val Glu Ala Lys 805 810 815
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10							gcg Ala 55									312
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20		-					cac His									408
25							cgc Arg									456
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30			Thr					Thr				Asn			ttg Leu	552
35		Lys					cgc Arg				Tyr				ctg Leu 160	600
40						Asp	cag GIn			Pro						648
45				_	Gly									His	tac Tyr	696
		-													ggc Gly	744

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5															aac Asn		792
10															ccc Pro		840
10															gtg Val 255		888
15															gcg Ala		936
20															ccc Pro		984
25								Pro						-	gcc Ala		1032
2.0								ccc Pro							ctc Leu	tga	1080
30	ggg	ggat	gtg g	gccgc	ccaa	ac co	ccgc	cagg	g atg	ggtgo	cct	agg	gtcc	ctc (gcgc	caaaa	1140
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	Pro 145	Lys	Val	Glu	He	Leu 150	Arg	Asn	Ala	He	Arg 155	Tyr	lle	Glu	Gly	Let 160
5	Gln	Ala	Leu	Leu	Arg 165	Asp	GIn	Asp	Ala	Ala 170	Pro	Pro	Gly	Ala	Ala 175	Ala
10	Phe	Tyr	Ala	Pro 180	Gly	Pro	Leu	Pro	Pro 185	Gly	Arg	Gly	Gly	GI u 190	His	Tyr
15	Ser	Gly	Asp 195	Ser	Asp	Ala	Ser	Ser 200	Pro	Arg	Ser	Asn	Cys 205	Ser	Asp	GI
	Met	Met 210	Asp	Tyr	Ser	Gly	Pro 215	Pro [·]	Ser	Gly	Ala	Arg 220	Arg	Arg	Asn	Cys
	Tyr 225	Glu	Gly	Ala	Tyr	Tyr 230	Asn	Glu	Ala	Pro	Ser 235	Glu	Pro	Arg	Pro	G1y 240
25	Lys	Ser	Ala	Ala	Va I 245	Ser	Ser	Leu	Asp	Tyr 250	Leu	Ser	Ser	lle	Va I 255	Glu
30	Arg	lle	Ser	Thr 260	Glu	Ser	Pro	Ala	Ala 265	Pro	Ala	Leu	Leu	Leu 270	Ala	Asp
35	Val	Pro	Ser 275	Glu	Ser	Pro	Pro	Arg 280	Arg	GIn	Glu	Ala	Ala 285	Ala	Pro	Ser
	Glu	Gly 290	Glu	Ser	Ser	Gly	Asp 295	Pro	Thr	GIn	Ser	Pro 300	Asp	Ala	Ala	Pro
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25							gat gag Asp Glu 50	98
30					ly His		cac tgc His Cys	46
35							atg gat Met Asp	94
40							aag gtc Lys Val	42
10					rg Cys		ccc aac Pro Asn 115	90
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10	gat ggc atg ccc gaa tgt aac agt cct gtc tgg tcc aga aag agc agt Asp Gly Met Pro Glu Cys Asn Ser Pro Val Trp Ser Arg Lys Ser Ser 165 170 175 180	582
15	act ttt gac agc atc tac tgt cct gat gta tca aat gta tat gcc aca Thr Phe Asp Ser ile Tyr Cys Pro Asp Val Ser Asn Val Tyr Ala Thr 185 190 195	630
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20	cgg atc acc tcc tca gag caa cct ggg ttg cct ctc cag gat ctg gct Arg lle Thr Ser Ser Glu Gln Pro Gly Leu Pro Leu Gln Asp Leu Ala 215 220 225	726
25	tct ctc tct cca gtt gcc agc acc gat tca cag cct cga act cca ggg Ser Leu Ser Pro Val Ala Ser Thr Asp Ser Gin Pro Arg Thr Pro Gly 230 235 240	774
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5	Tyr Ty 145	yr Se	er Leu	Pro	Gly 150	Gln	Ser	Cys	Ser	Glu 155	Pro	Thr	Ser	Pro	Thr 160
	Ser As	sn Ċy	s Ser	Asp 165	Gly	Met	Pro	Glu	Cys 170	Asn	Ser	Pro	Val	Trp 175	Ser
10	Arg Ly	ys S€	er Ser 180		Phe	Asp	Ser	l le 185	Tyr	Cys	Pro	Asp	Val 190	Ser	Asn
15	Val Ty	yr Al 19		Asp	Lys	Asn	Ser 200	Leu	Ser	Ser	Leu	Asp 205	Cys	Leu	Ser
20	Asn I	le Va 10	ıl Asp	Arg	lle	Thr 215	Ser	Ser	Glu	Gln	Pro 220	Gly	Leu	Pro	Leu
25	Gln As 225	sp Le	eu Ala	Ser	Leu 230	Ser	Pro	Val	Ala	Ser 235	Thr	Asp	Ser	Gln	Pro 240
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48

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10					ctc Leu 40						ggg Gly	144
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15					gtg Val							240
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25					ctg Leu							336
30					gag Glu 120							384
		Arg			ctc Leu			Gln			_	432
35					ggc Gly				-		_	480
40					tcc Ser					_	_	528
45					ggg Gly							576
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25 Pro Gly Tyr Glu Arg Thr Glu Leu Thr Leu Ser Pro Glu Ala Pro Gly
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Pro Leu Glu Asp Lys Gly Leu Gly Thr Pro Glu His Cys Pro Gly Gln 30 50 55 60

Cys Leu Pro Trp Ala Cys Lys Val Cys Lys Arg Lys Ser Val Ser Val 65 70 75 80

Asp Arg Arg Ala Ala Thr Leu Arg Glu Lys Arg Arg Leu Lys Lys 85 90 95

Val Asn Glu Ala Phe Glu Ala Leu Lys Arg Ser Thr Leu Leu Asn Pro 100 105 110

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10	Glu Cys Ser Ser His Ser Ala Ser Cys 165	Ser Pro Glu Trp Gly Ser Ala 170 175	
15	Leu Glu Phe Ser Ala Asn Pro Gly Asp 180 . 185	His Leu Leu Thr Ala Asp Pro 190	
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